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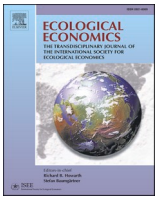

A procedure for globally institutionalizing a 'beyond-GDP' metric

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ABSTRACT

If governments are serious about meeting environmental and social goals, they should overcome dominance of the GDP indicator in political discourse. Institutionalizing a beyond-GDP metric would be an essential step, in interaction with a shift in the direction of an "agrowth" paradigm. For a significant step forward, a permanent UN panel could be charged to explore the options and prepare a metric for global implementation. This essay outlines the choice spectrum and provides criteria and guidelines for the metric-selection process. It is suggested that the panel considers four critical dimensions of potential alternatives, namely means versus ends, objective versus subjective information, aggregate index versus multiple indicators, and monetary versus other units. In deciding about each dimension, serious attention needs to be given to the psychological-communicative appeal of the resulting options, so as to guarantee a fluent uptake of the selected beyond-GDP metric in society, media and politics. The combined environmental and inequality crises at national and global scales make this the right time to finally translate a respectable history of beyond-GDP thinking into practical action.

1. Introduction

Although it is widely accepted that the Gross Domestic Product (GDP) is a poor measure of societal progress, it still dominates media and politics. The main shortcomings of the GDP are that it does not capture environmental damages, inequality and the informal economy (more details are in Table 1). It therefore biases policy evaluation towards options that promote average income growth over sustainability and social goals.

Climate change is arguably the major environmental challenge for future economic or GDP growth, since climate damages are predicted to generate substantial economic costs and stringent climate policies may curtail growth (van den Bergh, 2017). Fear of the latter is an important reason for many voters and politicians to refrain from genuinely supporting ambitious climate policy. This underpins the need to move away from a focus on GDP in public-policy debates.

Both criticism of GDP and proposals for alternative indicators have a long history (Blanchet and Fleurbaey, 2013), but so far have not threatened the dominance of GDP. Reasons include disagreement on whether the ideal approach is a composite index or a set of indicators, and institutional resistance by national accountants, policy-makers and interest groups (van den Bergh, 2009). I argue here that international organizations and national governments should join forces to overcome GDP dominance if they are serious about meeting environmental and social goals. Their aim should be to institutionalize a substitute metric (set) that reasonably approximates genuine well-being. In particular, I suggest that effective institutionalization of metrics beyond GDP could be achieved by creating a permanent panel under the auspices of the United Nations. To this end, I outline the choice spectrum and provide criteria and guidelines for the metric-selection process.

2. Potential insights from alternative progress metrics

Based on insights generated by many studies employing alternative metrics of progress, one might conclude that we do not really need an aggregate progress indicator for political and policy decision-making in the future. The reason is that green-GDP types of studies, such as based on the Index of Sustainable Economic Welfare (ISEW) (Daly and Cobb, 1989) and the closely related Genuine Progress Indicator (GPI) – which try to repair the shortcomings listed in Table 1 –, show that many rich countries (Posner and Costanza, 2011) and even the world as a whole (Kubiszewski et al., 2013) have reached a welfare plateau and that

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Table 1
Main shortcomings of GDP as a metric of social welfare and progress.

1	GDP harms two principles of good bookkeeping: (i) divide between costs and benefits; and (ii) correct for changes in stocks
2	GDP ignores income inequality, basic needs, human adaptation to higher income and more consumption, and effects of relative income (i.e. comparison with others)
3	GDP neglects the informal economy (non-market transactions), including housework, voluntary work and self-sufficient food production (especially relevant to many low-income countries)
4	GDP does not capture environmental and ecosystem damages, biodiversity loss, and the depletion of renewable and non-renewable natural resources

Note: summary of the literature survey in van den Bergh (2009).

further growth will not add much to well-being. A similar finding is suggested by empirical evidence on happiness-income delinking (Easterlin et al., 2010) and studies of hedonic adaptation (Frederick and Lowenstein, 1999). Further confirmation comes from stable and converging values of the Human Development Index (HDI) for rich nations (van den Bergh and Botzen, 2018). It therefore appears valid to question the measurement of growth, or even well-being, at least in those countries that have already attained a welfare plateau.

Add to this that future economic growth in rich countries may be low anyway, not just because of the Covid-19 crisis and negative global environmental feedback (Dell et al., 2012), but also as both education and technical innovation seems to have reached the realm of diminishing returns (Gordon, 2016). This suggests that if we could get rid of the focus on GDP, potential future disappointments of our societies would be avoided: namely, that growth of both GDP and welfare will slow down or even come to a halt.

In view of both previous points, one might claim that no alternative well-being or progress indicator for GDP is really needed to assess further developments in rich countries. Instead, it seems sufficient to focus on inequity (of income and well-being) and global environmental issues that still lose out in the competition with GDP growth. In other words, we do not really need a substitute for GDP to know what its growth means for well-being or social welfare: namely very little. However, such arguments are not easily going to convince a majority of politicians and governments. Moreover, appeals to give less importance to GDP might be more effective if they go along with evidence, in the form of an alternative aggregate measure, that GDP growth does not necessarily and always translate into genuine progress of a society. Hence, it is worthwhile to garner support for a substitute index or indicator (set) capable of replacing the GDP indicator in political discourse.

3. Learning from success stories of GDP and IPCC

Although we have learned useful lessons from research on alternative progress metrics, this has not translated into implementation of an alternative indicator as a core element of current national indicator systems. The reason is that GDP is hard to compete with, having become a global standard that is adopted in virtually all countries. It is supported by a transparent accounting framework laid out in the System of National Accounts (SNA), whose harmonization is institutionally supported by the United Nations (UN). In contrast, the Beyond-GDP community still lacks a common, harmonized language, as well as global institutions and organizations that could support it. In line with this, it is very heterogeneous, proposes many different indicators, and uses a variety of terms for similar or even identical concepts relating to well-being, progress or sustainability (Hoekstra, 2019).

To institutionalize a 'beyond GDP' metric (set) around the world, one needs to learn from the success of the GDP, in terms of features that make it attractive and the particular institutional support it receives. As we will discuss later, the aggregate character and monetary dimensions of the GDP contribute to the first. Regarding the second, the standardized calculation of the GDP is controlled by an inclusive and global organization, namely the UN. With its ample experience in creating communities involving scientists, government representatives and NGOs to tackle policy-relevant issues, the UN provides the best context to work on the implementation of a beyond-GDP metric. In fact, a firm basis for the GDP was created by a community that emerged after the Second World War, when the UN established the Sub-Committee on National Income Statistics to develop the system of national accounts (SNA). A more recent example relevant to sustainability and well-being is the Intergovernmental Panel on Climate Change (IPCC), which serves as a global and inclusive institution for transferring insights about climate change and policy from science to society and politics.

Likewise, a future UN panel could help in guaranteeing a solid and inclusive process of collecting and transferring relevant insights about beyond-GDP metrics from science to politics. This would contribute to the institutionalization in all countries of a consistent progress metric as a substitute for the GDP. In turn, this could facilitate the implementation of adequate national policies to address urgent social and sustainability issues.

4. A panel under the auspices of the United Nations

The foregoing suggests that a concerted effort by countries through the UN system could aid in getting more focus and acceleration in selecting a beyond-GDP metric (set). In particular, an interdisciplinary and international UN panel with executive power regarding coordination of national policy indicators could provide the missing permanent bridge from social and sustainability sciences to statistical offices and policy makers.

The panel would have to institutionalize a relevant beyond-GDP metric (set) to empower sustainability and social policies worldwide. As part of this, the panel should coordinate the development of a new accounting framework and language to create a solid and globally uniform basis for a beyond-growth metric. This will create clarity about data requirements and allow for regular and globally consistent calculation of the metric, in turn providing policy-makers with a tool for assessing and supporting sustainability and equity policies. Challenges and tasks of the panel involve both fundamental and practical issues.

4.1. A fundamental transition away from the growth paradigm

It is not unlikely that political groups or particular countries will resist the formation of a beyond-GDP panel. One understandable but misplaced fear is that it would mean supporting an anti-growth position. However, one should recognize that since 'beyond GDP' means giving less attention to GDP information, it is more in line with adopting a kind of neutral position known as 'agrowth', namely being indifferent about the specific course followed by GDP (van den Bergh, 2018). It allows giving more priority to urgent social and environmental issues without being immediately overruled by a dogmatic push for economic growth. Agrowth could serve as the intellectual foundation of a genuine beyond-GDP approach. Conversely, substituting GDP by a beyond-GDP metric could reinforce an agrowth paradigm, by aiding escape from the unproductive polarization of pro- versus anti-growth. Hence, in the process of preparing an alternative to GDP, the UN panel, along with enthusiastic supporters and countries, might embrace and diffuse the agrowth position, as this could help to reduce potential resistance against the panel and its assignment.

To avoid confusion, it may be noted that an 'agrowth paradigm' does not imply limiting growth opportunities for low-income countries in the global south. One needs to recognize, though, that if such growth follows the global-north model guided by GDP, it is likely to compromise environment and equity. Indeed, a strong focus on GDP will promote developments that sacrifice equity and fair opportunities for the whole population. In addition, by ignoring the informal economy, GDP tends to overestimate the progress of low-income countries due to a rapid

transition to a market economy, notably if this goes along with many people moving away from subsistence agriculture and ending up in the slums of large cities. This illustrates that the flawed nature of the GDP as a welfare/progress metric extends beyond the scope of rich nations. To illustrate, an empirical study of a panel dataset covering a period of four decades and 81 quality-of-life indicators found that income per capita had a significantly positive impact on only a minority of indicators (Easterly, 1999). These considerations suggest that striving towards an agrowth paradigm and replacement of GDP by a beyond-GDP indicator (set) make sense when aiming for a more equitable and sustainable development in both the global north and south.

4.2. Communicative and psychological appeal

In comparing the possible choices regarding the metric (set), the panel should consider both their scientific robustness and psychological-communicative capability. Regarding the first, the main question is how well an indicator integrates direct well-being, including equity, and longer-term environmental impacts on well-being. This indicates that the panel should include experts on these themes as well as on how to integrate them. In particular, panel members with experience regarding comparison of indicators and aggregation of information would be essential.

Regarding psychological-communicative capability, the main question is how indicators should be designed and presented to make sure that they are easily and well understood by a broad group of potential users in society (Rosling, 2007). To make an informed decision on this, the panel could incorporate experts from the cognitive and communication sciences and give them the task to shed light on which metric approach most likely overcomes GDP dominance. This might involve testing for several countries how journalists, politicians and citizens respond to different metric options as sketched below. I looked for academic studies in this vein but did not find any. This suggest that research on this issue is welcome or even urgent, so that the panel can build upon its results.

To illustrate, given humans' bounded rationality, it is understandable that an aggregate indicator is so popular. It avoids a multitude of information describing the complex economy and human well-being, which simplifies information transfer through education and media. It is therefore not unlikely that we will need another aggregate indicator or index rather than a set of indicators (or indexes) to escape from behavioural and institutional 'lock-in' of the GDP. However, other considerations play a role as well, as discussed henceforth.

4.3. Reflecting upon four indicator dimensions

To prepare a well-informed decision on which metric to focus on, the panel should address four important questions with regard to indicators, related to the dimensions of means versus ends, objective versus subjective information, the sheer number of indicators, and – if a single metric – whether in monetary or non-monetary units.

First, the panel should decide whether steering society is best done on the basis of 'means indicators' like inclusive wealth (the accounting value of an economy's produced, human and natural capital, UNU/IHDP-UNEP, 2015) or on the basis of 'ends indicators' like social welfare or happiness? (Kahneman et al., 2004). If the right policies for sustainability and wellbeing are in place, there will be a one to one connection between the two (Arrow et al., 2012). Nevertheless, one needs to judge which practical elaborations of these alternatives are more challenging in terms of construction, theoretical underpinning, and data availability and reliability. There is no perfect option here, and so the panel's task is to assess for which option advantages more outweigh disadvantages, building upon existing evaluations in the scientific literature (van den Bergh and Antal, 2014).

Second, the panel should deliberate whether to focus on objective measures – such as social statistics on income, distribution, social contacts, health, freedom and corruption – or on subjective measures – such as individual responses to happiness and life satisfaction surveys (for more details, see ch.11 of the recent "Dasgupta review on the Economics of Biodiversity," Dasgupta, 2021). In terms of practice and policy impact, the UN frequently employs the first approach to report developments worldwide, notably of low-income countries; the second approach has been less popular in actual policy-making settings, but recently gained attention through New Zealand's project to link important national policies to 'Living standards' and a 'Well-being budget' (Karacaoglu, 2020).

Third, the panel has to decide how many 'beyond growth' indicators are considered worthy of investing significant time and effort in. In other words, should one strive for a single metric or a set of few or many indicators? Five main options are shown in Table 2, along with advantages and disadvantages. The ultimate choice should arguably give much weight to which metric (set) is regarded most likely to replace the GDP indicator from a communicative perspective. As part of this crucial choice, one needs to select between index and indicator: the first covers multiple issues or themes and requires aggregation plus weighting; the second avoids this but typically only covers one issue or theme. In addition, the panel should think carefully about suitable aggregations of indicators into an index. Indeed, distinct indexes easily produce inconsistent insights – as illustrated by a comparison of national sustainability indexes (Pillarisetti and van den Bergh, 2010).

Fourth, the panel should examine whether a monetary metric will more easily gain support than a non-monetary one. Arguably, part of the popularity of GDP (per capita) is that it is in monetary units, which one can easily interpret as a national (average) income level. Generally, most operational alternative indexes, apart from green-GDP types of indicators like the ISEW, lack this feature. They may thus have a communicative disadvantage. In fact, its non-monetary value may partly explain why the HDI has been unable to replace the GDP as the dominant measure of countries' progress. A metric with a monetary value will have communicative advantages as all journalists, voters and politicians are trained in reading monetary information and comparing income over time or between households. An 'indicator transition' from GDP to a green GDP might therefore be easier than to an alternative with a non-monetary scale.

4.4. Relation with existing indicators like SDGs

Most countries use already a multitude of economic, social and environmental indicators at distinct policy levels – local, provincial and national – and for different purposes, such as monitoring, policy preparation, or input to social and political debate. The proposal to replace GDP by a 'beyond GDP' metric (set) does not mean that all these indicators are to be removed. The aim of dethroning GDP is to create more space for environment and equity at the national level of policy making, not to question the use of indicators for other purposes or at other levels. To illustrate, the SDG indicator approach, in which the UN has invested much, can continue parallel to the proposed 'beyond GDP' approach, although perhaps some adaptations will be needed. In fact, it is likely that achieving SDG goals specifically focused on equity and sustainability will become easier if the constraint of unconditional growth is ultimately relieved, notably in rich countries, through the panel's work. At the same time, this could create more global space for sustainable growth by low-income countries.

On the other hand, the problem of GDP dominance has not been solved by the development of the SDGs. This is arguably due to the large number of SDGs, a great diversity in their units, and overlap or even inconsistency between some. As a result, the SDGs do not easily or quickly allow getting an overview of the state of, or change in, a country's overall welfare performance. In fact, the SDG approach seems to contrast with the need for indicator transparency and uncomplicatedness arguably required to reduce the dominance of the GDP. Indeed, few laypersons or even experts will be able to faultlessly list the different

Table 2
Five options for 'beyond GDP' metrics and their (dis)advantages.

Option	Advantages	Disadvantages
1. *A single evaluation index or indicator* Aggregates relevant economic, social and environmental information into a single number. The ISEW index is a good example. Indicators can focus on happiness or subjective well-being.	Offers perhaps the best chance to dethrone the GDP as it is also a single metric that simplifies complexity. If an index, it can integrate many different issues. A single index or indicator can in principle compete well with, and might thus stand a good chance to replace, GDP.	If an index, it requires much aggregation and (to some extent subjective) weighting. Certain issues may be over-represented due to arbitrary weighting. If an indicator, it may omit certain issues.
2. *Two evaluation indexes or indicators* This could capture current and future well-being, with the latter depending on long-term sustainability effects. Indicators under 1 can capture the first, while the 'inclusive wealth' indicator might serve to capture the second.	Keeping the two basic dimensions clearly separate contributes to transparent public and political debates about fundamental trade-offs.	It still requires considerable aggregation and weighting. A set of two is probably less attractive and powerful than a single aggregate indicator such as GDP.
3. *Three evaluation indicators or indexes* These would represent the key dimensions of well-being, sustainability and equity. Again, Indicators under 1 can capture the first. The broad scope of sustainability might be captured as done by the Environmental Sustainability Index (ESI Wendling et al., 2020). For equity the Gini index or Atkinson's inequality measure can be used, with the latter giving more weight to the lower end of the income distribution (Atkinson, 1970).	Avoids aggregation of very different aspects of reality. This small set of indicators also contributes to transparent public and political debates about fundamental trade-offs.	For many people and journalists this may already be an overdose of information. A set of three will not easily replace a single indicator like GDP in media and politics.
4. *An intermediate set of complementary indicators, say 5 to 10* This can be regarded as a compromise between the very distinct options 3 and 5. Influential initiatives promoting indicator dashboards of this kind are the Stiglitz-Sen-Fitoussi commission (Stiglitz et al., 2018) and the OECD's Better Life Initiative (OECD, 2013).	This avoid aggregation into indexes as in options 1-3. It can be based on more concrete and disaggregate indicators about which there is little debate and disagreement.	Which issues indicators should cover becomes arbitrary and subjective. Too many indicators obscures clear trade-offs for public and political debate. It is further unlikely this option will weaken GDP dominance. Note that the widely used set of macro-indicators (unemployment, inflation, etc.) has never threatened GDP dominance.
5. *A large set of indicators* These could explicitly capture each domain of human life and sustainability. This approach is well illustrated by the 17 Sustainable Development Goals (SDGs) and associated 169 sub-goals (known as 'targets') (UN, 2015).	Such a rich approach allows representation of multiple stakeholders and interests. One can strive for complete coverage of issues. Nothing important has to be left out.	Complex reality is translated into a complex set of indicators which few will be able to oversee. This may hamper communication with the public and politics. Interest groups may highlight some indicators at the cost of others. Contradiction and overlap between certain indicators is likely while trade-offs become opaque (Pradhan et al., 2017).

Note: The text discusses illustrative indicators in more detail and with references.

(groups of) SDGs. There just are too many of them, and the human brain cannot handle so much information. In line with this, aggregate indicators and SDGs occupy extreme positions of the choice spectrum regarding indicators, as illustrated by Table 2. My personal take is that to maximize the likelihood of dethroning the GDP we'd best focus on a single metric with a monetary value. However, it is important that this issue is examined critically and with an open mind, also taking into account experiences with SDGs so far – ideally based on interviews and surveys with relevant stakeholders.

5. Conclusions

The increasingly felt urgency in society about effectively responding to climate change, biodiversity loss and global inequality make this the right time to bring beyond-GDP thinking finally into practice. Learning from the historical success of GDP construction and climate-change assessment guided by the United Nations, a beyond-GDP panel under the auspices of the UN would create the required institutional support, which through careful deliberation, could deliver an internationally harmonized beyond-GDP metric (set) to replace the GDP indicator. The panel would guide implementation of the alternative by statistical offices around the world via support of metric construction and data collection as well as through communication of a new agrowth paradigm consistent with 'beyond GDP'. Ultimately, this would aid the preparation, evaluation and support of relevant public policies.

To decide about a metric (set), the panel should consider critical dimensions of it, notably whether to focus on means versus ends, objective versus subjective information, an aggregate index versus multiple indicators, and monetary versus other units. To arrive at a good choice, the panel's ponderings should assign a serious role to the psychological-communicative appeal of alternative options, so as to guarantee a fluent uptake of the selected option in society, media and politics. While the panel will not have an easy task, the urgency to reduce GDP dominance is great, the knowledge about alternatives is established, and the potential benefits for humanity will be perpetual.

Declaration of Competing Interest

None.

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